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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,480	02/12/2001	Akira Senoo	Q62848	8117

7590

05/23/2002

SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/780,480

Applicant(s)

SENOO ET AL.

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of invention Group II, claims 10-16 in Paper No. 5 is acknowledged.
2. Claims 1-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Creased Armature Winding Insulator For Dynamoelectric Machine.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,829,206 to Honshima et al.

Honshima et al. clearly teaches the construction of an armature for an electric rotary machine, the armature comprising:

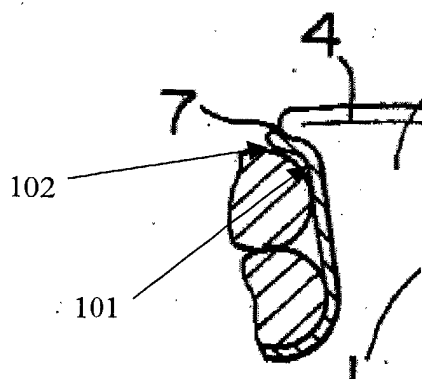
an armature core (2) provided with a plurality of slots (1) extending in an axial direction and disposed alongside each other in a circumferential direction;

an armature winding (3) inserted in the slots so as to be mounted on the armature core; and

an insulator (6) mounted in each of the slots wherein:

the insulator is disposed between an inner face of each slot and the armature winding (Figures 1, 2A, 2D, 4, 5A and 5B); and

first creases (101, added by the examiner) are formed on side portions of each insulator so as to extend in a lengthwise direction of the slot at a slot-opening end of the side portions, the first creases being formed by first bent parts for angling the slot-opening ends of the side portions so as to be apart from each other.¹



7. With regards to claim 11, Honshima et al. disclose second creases (102, added by the examiner) are formed on the side portions of each insulator so as to extend in a lengthwise

direction of the slot at a location closer to the slot-opening end than the first creases, the second creases being formed by second bent parts for angling the slot-opening ends of the side portions toward each other.

8. With regards to claim 13, Honshima et al. disclose the side portion of each insulator expand in a circumferential direction at the bottom ends of the side portions of the insulator, thereby coming into close contact with inner faces of the slot toward the bottom thereof as shown in Figures 1, 2A, 2D, 4, 5A and 5B.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,829,206 to Honshima et al. in view of U.S. Patent No. 5,508,577 to Shiga et al.

Honshima et al. disclose the construction of an armature for an electric rotary machine as described above.

However, it fails to disclose the first crease and the second crease of a first side portion of each insulator are formed shifted toward the bottom of the slot with respect to the first crease and the second crease, respectively, of a second side portion of each insulator, whereby the top ends of the first and second side portions of each insulator, one overlapping the other, enclose an opening of each slot in a manner such that the top end of the second side portion is positioned over the top end of the first side portion.

Shiga et al. teach the construction of an electric rotating machine wherein a first side portion of each insulator are formed shifted toward the bottom of the slot with respect to a second side portion of each insulator, whereby the top ends of the first and second side portions of each insulator, one overlapping the other (Figure 7), enclose an opening of each slot in a manner such that the top end of the second side portion is positioned over the top end of the first side portion for the purpose of improving the resistance to the centrifugal forces.

It would have been obvious to one skilled in the art at the time the invention was made to use the formation of the side portions of the insulators disclosed by Shiga et al. on the armature disclosed by Honshima et al. for the purpose of improving the resistance to the centrifugal forces.

11. With regards to claim 14, Shiga et al. disclose an armature winding constituted by at least one winding assembly into which a pair of first and second winding groups is assembled before insertion in the slots, the first winding group comprising a number of first winding sub-portions each having one turn constructed by winding a strand of wire made of a continuous conductor so as to alternately occupy an inner layer and an outer layer in a slot depth direction within the slots at intervals of a predetermined number of slots, the first winding sub-portions being disposed at a pitch of one slot from each other and being equal in number to the predetermined number of slots, and the second winding group comprising a number of second winding sub-portions each having one turn constructed by winding a strand of wire made of a continuous conductor so as to alternately occupy an inner layer and an outer layer in a slot depth direction within the slots at intervals of the predetermined number of slots and so as to be inversely wound and offset by an electrical angle of 180 degrees relative to the first winding sub-portions, the second winding

sub-portions being disposed at a pitch of one slot from each other and being equal in number of the predetermined number of slots as shown in Figure 12.

12. With regards to claim 15, Honshima et al. disclose an armature winding which comprises a plurality of winding assemblies, and one insulator is received in each slot for insulating the plurality of the winding assemblies from an inner face of each slot as shown in Figures 1, 2A, 2D, 4, 5A and 5B.

13. With regards to claim 16, Shiga et al. disclose an armature winding which comprises a plurality of the winding assemblies, and a plurality of insulators are received in each slot for individually insulating the plurality of the winding assemblies from an inner face of each slot as shown in Figure 7.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramírez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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Pedro J. Cuevas
May 17, 2002


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